

CLIPPEDIMAGE= JP02000234093A  
PAT-NO: JP02000234093A  
DOCUMENT-IDENTIFIER: JP 2000234093 A  
TITLE: HYDRODESULFURIZATION AND ISOMERIZATION OF LIGHT  
HYDROCARBON OIL

PUBN-DATE: August 29, 2000

INVENTOR-INFORMATION:

NAME	COUNTRY
KIMURA, TAKAO	N/A
OSHIO, ATSUYASU	
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	N/A

ASSIGNEE-INFORMATION:

NAME	COUNTRY
PETROLEUM ENERGY CENTER	N/A
COSMO OIL CO LTD	N/A

APPL-NO: JP11324243

APPL-DATE: November 15, 1999

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C07C005/29 ; C07C007/163  
; C07C009/14 ; C07C013/16 ; C07C015/04 ; C10G049/06 ;  
C07B061/00

ABSTRACT:

PROBLEM TO BE SOLVED: To provide a technology for obtaining an isomerized gasoline with little sulfur content by performing devulcanization and isomerization of a light hydrocarbon oil contg. sulfur, wherein isomerization can be performed simultaneously with devulcanization which has been indispensable as a pretreatment process of isomerization, in order to simplify required installations and decrease the running cost.

SOLUTION: A catalyst with a carrier made of an oxide or a

hydroxide of  
zirconium, having a sulfate radical at a concn. of 1-3 mass  
% as a sulfur  
component, contg. palladium or nickel at a concn. of  
0.05-10 mass % (wherein  
platinum may be included at a concn. of 0.05-10 mass % when  
palladium is  
included in the catalyst), stabilized by baking at a temp.  
of 550-800

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TITLE: Catalyst for hydrodesulfurization isomerization of  
light hydrocarbons  
comprises zirconium oxide or hydroxide support, sulfate  
radical and palladium,  
palladium and platinum or nickel

INVENTOR: HAGIWARA, K; IMURA, T ; KAWAMURA, T ; OHSHIO, N ;  
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PATENT-ASSIGNEE: COSMO OIL CO LTD[MAZN], PETROLEUM ENERGY  
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PRIORITY-DATA: 1999JP-0324243 (November 15, 1999) ,  
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1999JP-0324242 (November 15,  
1999)

PATENT-FAMILY:

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EP 1142636 A1	October 10, 2001	E
000	B01J 027/053	
WO 200035581	June 22, 2000	J
035	B01J 027/053	
A1	August 29, 2000	N/A
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JP 2000233132	August 29, 2000	N/A
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LI LU MC NL PT SE CA U  
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EP 1142636A1	N/A	1999EP-0959863
December 16, 1999		
EP 1142636A1	N/A	1999WO-JP07082
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EP 1142636A1	Based on	WO 200035581
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 C07C015/04 ;  
 C10G035/085 ; C10G045/10 ; C10G049/06 ; C10G069/08

ABSTRACTED-PUB-NO: WO 200035581A

BASIC-ABSTRACT: NOVELTY - The catalyst comprises a zirconium oxide or hydroxide support, sulfate radical and (i) palladium, (ii) palladium and platinum or (iii) nickel. The specific surface area after burning stabilization at 550-800 deg. C is 50-150m<sup>2</sup>/g.

DETAILED DESCRIPTION - Catalyst for hydrodesulfurization isomerization of light hydrocarbons, comprises a support comprising zirconium oxide or zirconium hydroxide, 1-3 mass%, in terms of sulfur, relative to the total weight of the catalyst composition, of sulfate radical, and, relative to the total weight of catalyst composition, (I) 0.05-10 mass% of palladium, (II) 0.05-10 mass% of palladium and 0.05-10 mass% of platinum, or (III) 0.05-10 mass% of nickel. The specific surface area after burning stabilization at 550-800 deg. C is 50-150m<sup>2</sup>/g.

INDEPENDENT CLAIMS are also included for the following:

(A) the manufacture of the catalyst composition by:

(1) impregnating palladium compound, palladium compound and platinum compound, or nickel compound in material obtained by treating zirconium hydroxide with material which imparts sulfate groups, and firing at 550-800 deg. C;

(2) impregnating palladium compound, palladium compound and platinum compound, or nickel compound in fired material obtained by treating zirconium hydroxide with material which imparts sulfate radicals and firing at 550-800 deg. C, and 300-700 deg. C;

(3) mixing zirconium hydroxide, material which imparts sulfate radicals, and palladium compound, palladium compound and platinum compound or nickel compound, and firing at 550-800 deg. C; or

(4) mixing zirconium hydroxide and a material which imparts sulfate groups, firing at 550-800 deg. C, impregnating with palladium compound, palladium compound and platinum compound or nickel compound, and firing at 300-700 deg. C;

(B) the hydrodesulfurization isomerization of light hydrocarbon oils by contacting the oil of sulfur content 700 mass ppm and hydrogen to the catalyst composition at 140-400 deg. C, pressure 1.0-4.5Mpa, LHSV 1.0-10h<sup>-1</sup> and hydrogen/oil ratio 1-3 mol/mol; and

(C) the application for the hydrodesulfurization isomerization of light hydrocarbon oils.

USE - Hydrodesulfurization and isomerization can be carried out simultaneously on light hydrocarbon oils.

ADVANTAGE - The catalyst has high activity and sulfur resistance. Running

costs are reduced.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS:

CATALYST LIGHT COMPRISE ZIRCONIUM OXIDE HYDROXIDE SUPPORT  
RADICAL PALLADIUM  
PALLADIUM PLATINUM NICKEL

DERWENT-CLASS: H04

CPI-CODES: H04-E; H04-F02E;

UNLINKED-DERWENT-REGISTRY-NUMBERS: 1521U; 1532U ; 1725U

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C2000-131191